AMENDMENTS TO THE CLAIMS

1.   (Currently amended) A method for measuring latency in a ring network in which traffic flows in first and second, mutually-opposite directions, the method comprising:

transmitting a latency measurement packet from an originating node to a peer node in the first direction in the network;

noting a time of receipt of the packet at the peer node;

transmitting the packet from the peer node back to the originating node in the second direction, while recording in the packet an indication of a peer node difference between a time of transmission of the packet from the peer node to the originating node and the time of receipt of the packet at the peer node;

noting a time of return of the packet to the originating node, so as to determine an originating node difference between a time of transmission of the packet from the originating node to the peer node and the time of return of the packet to the originating node; and

calculating the latency by taking a difference between the originating node difference and the peer node difference,

wherein transmitting the latency measurement packet comprises recording in the packet an indication of a class of service on the network, and transmitting the packet at a level of service accorded to the class, and wherein calculating the latency comprises determining the latency specific to the class of service.

2.   (Original) A method according to claim 1, wherein recording the indication of the peer node difference comprises recording in the packet the time of transmission of the packet from the peer node to the originating node and the time of receipt of the packet at the peer node, both measured with respect to a peer clock maintained at the peer node.

3.   (Original) A method according to claim 2, and comprising recording in the packet the time of transmission of the packet from the originating node to the peer node measured with respect to an originating clock maintained at the originating

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node, and wherein noting the time of return of the packet comprises recording the time of return with respect to the originating clock.

4.   (Canceled)

5.   (Original) A method according to claim 1, wherein transmitting the latency measurement packet comprises transmitting a plurality of latency measurement packets in sequence at given intervals, and wherein calculating the latency comprises calculating respective latencies of the packets returned to the originating node, so as to monitor a variation in the latencies.

6.   (Original) A method according to claim 5, wherein transmitting the plurality of the latency measurement packets comprises recording respective serial numbers in the packets in the sequence, and wherein calculating the respective latencies comprises disregarding the latencies of the packets returned to the originating node out of the sequence, as indicated by the serial numbers.

7.   (Original) A method for measuring latency in a network in which traffic is transmitted in a plurality of classes of service, the method comprising:

generating a latency measurement packet containing an indication that the packet belongs to a selected one of the classes of service;

transmitting the latency measurement packet from a source node in the network, so that the packet is passed through the network at a level of service accorded to the class;

noting a time of receipt of the latency measurement packet at a destination node in the network; and

calculating the latency for the selected one of the classes of service by taking a difference between a time of transmission of the latency measurement packet and the time of receipt thereof.

8.   (Canceled) A method according to claim 7, wherein generating the latency measurement packet comprises generating a plurality of latency measurement packets, containing respective indications that the packets belong respectively to the plurality of the classes of services, and wherein calculating the latency comprises determining the latency for each of the classes of service respectively.

9.   (Original) A method according to claim 7, wherein the network comprises a ring network, and wherein transmitting the latency measurement packet comprises transmitting the packet around the ring network so that the destination node of the latency measurement packet is the source node, and wherein calculating the latency comprises determining the latency for the selected one of the classes of service for a full circuit of the ring network.

10.   (Currently amended) A method for measuring latency in a network, comprising:

transmitting a sequence of latency measurement packets at given intervals from a source node in the network, while recording in the packets respective times of transmission thereof;

noting respective times of receipt of the packets at a destination node in the network;

determining respective latencies for the packets in the sequence by calculating differences between the respective times of transmission recorded in the packets and the respective times of receipt; and

monitoring a variation in the latencies over the sequence based on the calculated differences,

wherein transmitting the sequence of the latency measurement packets comprises recording respective serial numbers in the packets in the sequence, and wherein monitoring the variation in the latencies comprises disregarding the respective latencies of any of the packets that are received out of the sequence, as indicated by the serial numbers.

11.   (Canceled)

12.   (Original) A method according to claim 10, wherein the network comprises a ring network, and wherein transmitting the sequence of the latency measurement packets comprises transmitting the packets around the ring network so that the destination node of the latency measurement packets is the source node, and wherein determining the respective latencies comprises determining the latencies for a full circuit of the ring network.

13.   (Currently amended) Apparatus for measuring latency in a ring network in which traffic flows in first and second, mutually-opposite directions, the apparatus comprising first and second nodes in the network, the nodes comprising respective first and second clocks,

wherein the first node is adapted to transmit a latency measurement packet to the second node in the first direction in the network, and

wherein the second node is adapted to note a time of receipt of the packet at the second node using the second clock, and to transmit the packet back to the first node in the second direction, while recording in the packet an indication, determined using the second clock, of a second node difference between a time of transmission of the packet from the second node to the first node and the time of receipt of the packet at the second node, and

wherein the first node is further adapted to note a time of return of the packet to the first node, using the first clock, so as to determine a first node difference between a time of transmission of the packet from the first node to the second node and the time of return of the packet to the first node, and to calculate the latency by taking a difference between the first node difference and the second node difference,

wherein the first node is further adapted to record in the packet an indication of a class of service on the network, and to transmit the packet at a level of service accorded to the class, so that the latency that is calculates is specific to the class of service.

14.   (Original) Apparatus according to claim 13, wherein the indication of the second node difference recorded in the packet by the second node comprises a record of the time of transmission of the packet from the second node to the first node and the time of receipt of the packet at the second node, both measured using the second clock.

15.   (Original) Apparatus according to claim 14, wherein the first node is adapted to record in the packet the time of transmission of the packet from the first node to the second node, measured using the first clock.

16.   (Canceled)

17. (Original) Apparatus according to claim 13, wherein the first node is adapted to transmit a plurality of latency measurement packets in sequence at given intervals, and to calculate respective latencies of the packets returned to the first node so as to monitor a variation in the latencies.

18. (Original) Apparatus according to claim 17, wherein the first node is adapted to record respective serial numbers in the packets in the sequence, and to disregard the latencies of the packets returned to the first node out of the sequence, as indicated by the serial numbers.

19. (Original) Apparatus for measuring latency in a network in which traffic is transmitted in a plurality of classes of service, the apparatus comprising a node in the network, which is adapted to generate a latency measurement packet containing an indication that the packet belongs to a selected one of the classes of service and to transmit the latency measurement packet, so that the packet is passed through the network at a level of service accorded to the class, the node being further adapted to note a time of receipt of the latency measurement packet at a destination in the network and to calculate the latency for the selected one of the classes of service by taking a difference between a time of transmission of the latency measurement packet and the time of receipt thereof.

20. (Original) Apparatus according to claim 19, wherein the node is adapted to generate a plurality of latency measurement packets, containing respective indications that the packets belong respectively to the plurality of the classes of services, and to determine the respective latency for each of the classes of service based on the plurality of the packets.

21. (Original) Apparatus according to claim 19, wherein the network comprises a ring network, and wherein the node is adapted to transmit the packet around the ring network so that the destination of the latency measurement packet is the node itself, so as to measure the latency for the selected one of the classes of service for a full circuit of the ring network.

22. (Currently amended) Apparatus for measuring latency in a network, comprising a node in the network, which is adapted to transmit a sequence of latency measurement packets through the network at given intervals while recording

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in the packets respective times of transmission thereof, to note respective times of receipt of the packets at a destination in the network, and to determine respective latencies for the packets in the sequence by calculating differences between the respective times of transmission recorded in the packets and the respective times of receipt, so as to monitor a variation in the latencies over the sequence based on the calculated differences,

wherein the node is adapted to record respective serial numbers in the packets in the sequence, and to disregard the respective latencies of any of the packets that are received out of the sequence, as indicated by the serial numbers.

23.   (Canceled)

24.   (Original) Apparatus according to claim 22, wherein the network comprises a ring network, and wherein the node is adapted to transmit the packets around the ring network so that the destination of the latency measurement packets is the node itself, and wherein the respective latencies determined by the node are the latencies for a full circuit of the ring network.

25.   (Original) A method according to claim 23 wherein the step of downloading content over the wireless network is performed at a location where the content can not be received over radio channels.

26-31. (Canceled)

32.   (Previously presented) A method according to claim 23 wherein the audio system functions as a radio independent of the cellular phone, and the at least one detail comprises at least one identification detail of the radio station to which the radio is tuned.

33.   (Original) A method according to claim 32 wherein the at least one detail is stored in a memory in the cellular telephone.

34.   (Original) A method according to claim 23 wherein the wireless network is the Internet and the cellular telephone is WAP enabled.

35.   (Original) A method according to claim 23 wherein the cellular telephone communicates with the wireless network using a packet-oriented cellular protocol.

36.   (Original) A method according to claim 35 wherein the wireless network is a GSM network and the packet-oriented cellular protocol is GPRS.

37.   (Original) A method according to claim 23 wherein the content is transferred from the cellular telephone to the audio system via a wireless link therebetween.

38.   (Original) A method according to claim 37 wherein the wireless link uses a Bluetooth communication protocol.

39.   (Original) A method according to claim 23 wherein the content is transferred from the cellular telephone to the audio system via a wired link therebetween.

40.   (Currently amended) A method for storing a user's radio station preferences, comprising:

        inputting at least one identification detail regarding a radio station preferred by a user to an in-vehicle audio system;

        transmitting the at least one identification detail to a cellular telephone; and

        storing the at least one detail in a memory in the cellular telephone,

        wherein the audio system comprises a radio receiver fixedly installed in the vehicle and comprising a button on a front panel of the receiver, and wherein inputting the at least one identification detail comprises pressing the button on the front panel in order to provide the at least one identification detail.

41.   (Original) A method according to claim 40, and also comprising transmitting the stored at least one identification detail to another in-vehicle audio system.

42.   (Original) A method according to claim 41, and also comprising identifying the preferred radio station from the at least one detail, and responsive thereto, receiving and playing broadcast radio content from the preferred radio station.

43.   (Original) A method according to claim 40, and also comprising:

transmitting the stored at least one identification detail, over a wireless network, to an audio content provider;

identifying the preferred radio station from the at least one detail;

downloading broadcast radio content over the wireless network to the cellular telephone;

transferring the content from the cellular telephone to the in-vehicle audio system; and

playing the content on the in-vehicle audio system to a listener.

44.   (Original) A method according to claim 40 wherein the at least one identification detail is selected from the group consisting of radio station name, radio station ID code, radio station broadcast frequency, and radio station URL.

45-48. (Canceled)